

Afrotropical Asilidae (Diptera) 18. The genus *Smeryngolaphria* Hermann, 1912 (Laphriinae)

by

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ABSTRACT

A new species of *Smeryngolaphria* Hermann, *S. bromleyi*, is described from Nigeria and compared with the only other Afrotropical member of the genus, *S. pallida* Bromley, and the Neotropical genotype *S. melanura* (Wiedemann) from Brazil. A brief historical perspective and general discussion of the genus is provided.

HISTORICAL PERSPECTIVE

Smeryngolaphria has had a somewhat confusing history. Hermann (1912) created the genus for three Neotropical species previously placed in *Laphria* Meigen. Bromley (1935), when describing the first Afrotropical species, placed *Anisosis* Hermann, 1914, *Orthogonis* Hermann, 1914, and *Panamasilus* Curran, 1930 in synonymy, saying that '*Panamasilus* Curran from Panama is identical with the typical *Smeryngolaphria*' while *Anisosis* and *Orthogonis* were considered as subgenera. He briefly mentioned a few characters which he felt were important in separating the typical New World members of the genus from the primarily Oriental subgenera. Hull (1962) retained *Panamasilus* as a synonym but ignored Hermann's subgenera, preferring to retain *Anisosis* and *Orthogonis* as separate genera. Hull also placed the Nearctic *Laphria stygia* Bromley, 1931 in his list of *Smeryngolaphria* species. Martin & Wilcox (1965), however, subsequently placed *L. stygia* in *Orthogonis*, and this is where the species presently resides (Wood 1981), along with four Oriental (Oldroyd 1975) and one Afrotropical (Madagascar) species (Oldroyd 1980). Oldroyd (1975) in his catalogue of Oriental Diptera continued to handle *Orthogonis* and *Anisosis* separately but provided a new name for *Anisosis* (ie. *Laloides*) after discovering that this was a homonym. The most recently published synonymy for *Smeryngolaphria* is that of Martin & Papavero (1970) in which *Panamasilus* is the only synonym listed; I am following their concept of the genus.

Published work relating to Afrotropical *Smeryngolaphria* is confined to four articles. Bromley (1935) described *S. pallida* on the basis of a single male specimen from Zaïre (see list of material examined). Hull (1962) merely listed *pallida* as belonging to *Smeryngolaphria*. Oldroyd (1970) briefly discussed the genus, mentioning the thoughts of previous authors, and providing a new record for *pallida*. Finally, Oldroyd (1980) listed *pallida* in the catalogue of Afrotropical Diptera.

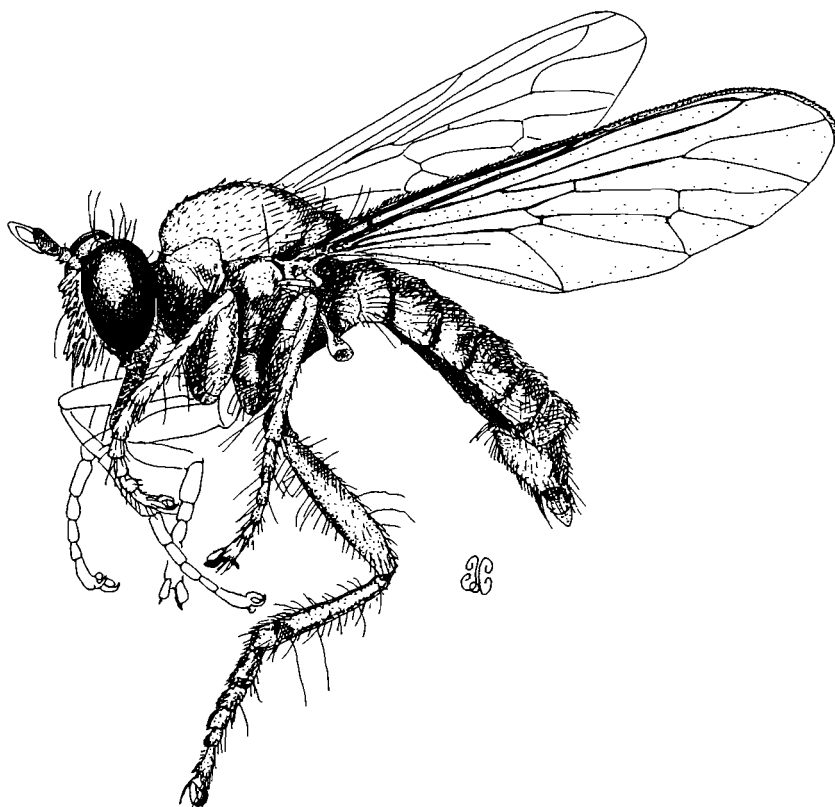


Fig. 1. *Smeryngolaphria pallida* Bromley, holotype ♂.

TAXONOMY

Smeryngolaphria Hermann, 1912

Smeryngolaphria Hermann, 1912: 226. Type-species, *Laphria melanura* Wiedemann, 1828, by original designation.

Panamasilus Curran, 1930: 20. Type-species, *P. xylota* Curran, 1930, by original designation (= *numitor* Osten Sacken, 1887).

The following redescription of the type-species, *Laphria melanura* Wiedemann, 1828, is provided in order to facilitate comparison, and discussion of generic and specific relationships.

Smeryngolaphria melanura (Wiedemann, 1828)

Figs 2, 5, 12–14

Laphria melanura Wiedemann, 1828: 508.

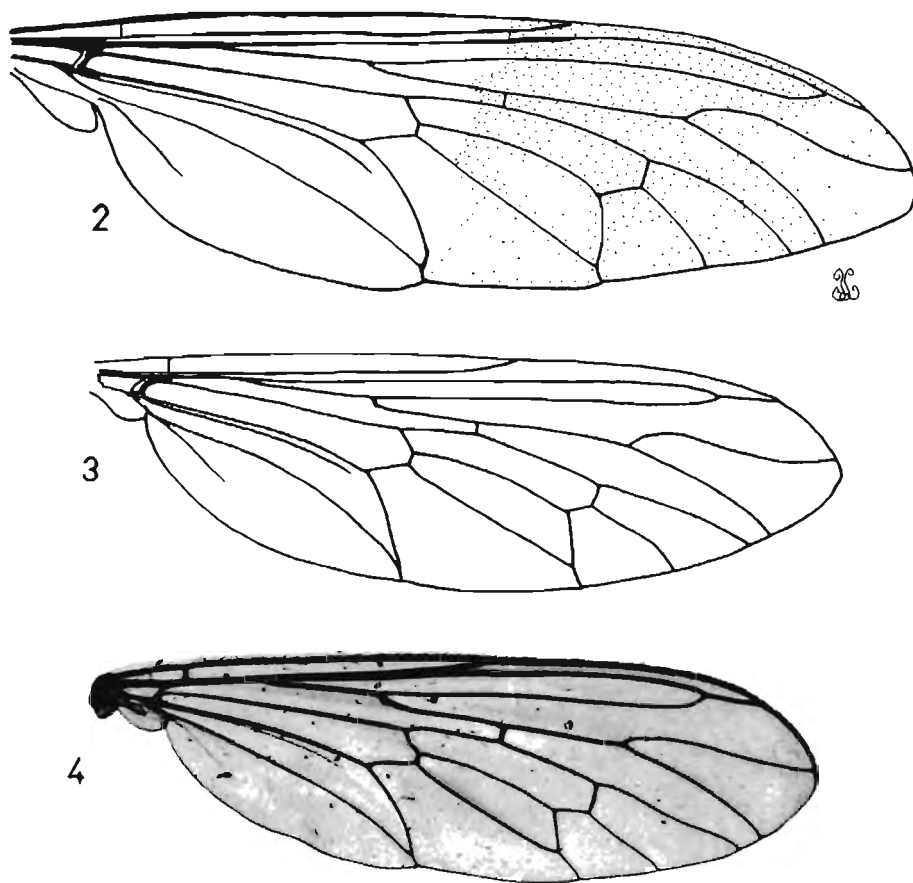
Smeryngolaphria melanura Hermann, 1912: 226; Carrera, 1960: 155; Hull, 1962: 333; Martin & Papavero, 1970: 39.

Redescription: Based on unique holotype specimen.

Head: Dark red-brown and yellow areas as indicated. Antenna: Scape and pedicel brown-yellow, flagellomeres both missing. All setae of scape and pedicel dark

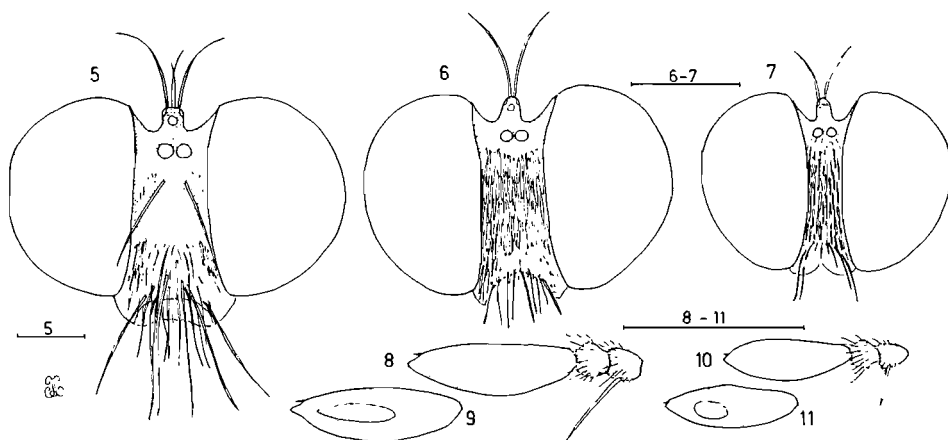
red-brown; scape with strong dark red-brown ventral bristle. Face (Fig. 5) width: maximum head width (measured anteriorly) ratio 4,7:1. Upper five-eighths dark red-brown, lower three-eighths yellow; upper dark area with 2 strong brown bristles centrally, near antennal bases; lower paler area with cluster of long yellow bristles and setae, a few of which are slightly dorsoventrally flattened (those occurring laterally) and approaching the condition found in the females of Afrotropical species. Vertex and frons black with few black setae laterally. Ocellar bristles yellow-brown. Occipital area dark red-brown dorsally, yellow-brown ventrally; extensively gold pruinose; major dorsal bristles brown and black; all setae golden yellow. Proboscis yellow but red-brown ventrodistally. Palpi pale yellow, 2-segmented, equipped with yellow setae.

Thorax: Brown-yellow, uniformly fine gold pruinose. Postpronotal lobes with yellow setae. Mesonotum with tiny black and yellow setae; acrostichal setae undifferentiated; dorsocentrals postsuturally situated only (best developed near hind margin); 3-4 notopleurals; 4 supra-alars; 3 postalars (all mesonotal bristles

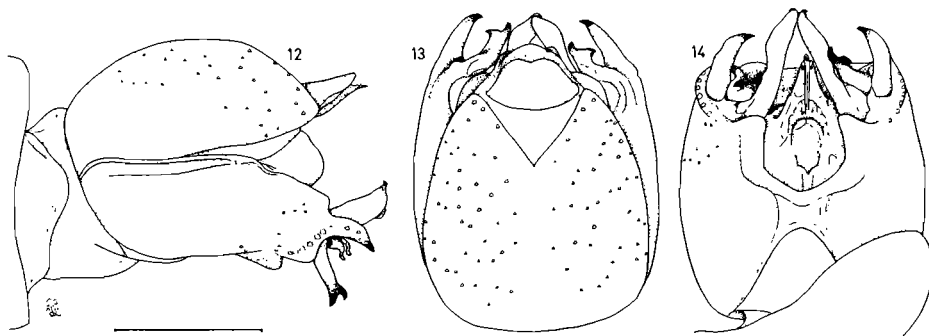


Figs 2-4. *Smeryngolaphria* species, wing venation. 2. *S. melanura* (Wiedemann). 3. *S. pallida* Bromley. 4. *S. bromleyi* sp. n.

brown-yellow). Scutellum with small black (few yellow) setae on disc, 8 brown-yellow marginal bristles. Anatergites (metanotal callosities) gold pruinose, lacking setae. Pleura fine gold pruinose; all setae and bristles brown-yellow. Hind and upper margins of anepisternum with brown-yellow bristles; katatergum with many long brown-yellow bristles. Postmetacoxal area membranous. Wing length 13,5 mm (from humeral crossvein to tip); venation as in Fig. 2; except for small areas of cells c , r_1 , r_{2+3} , br , bm , cup , a_1 and discal, wing covered with microtrichia; r_5 open; m_3 closed and stalked; $r-m$ crossvein at about one-third the distance along anterior margin of discal cell; membrane yellow-stained, especially anterobasally, entire wing tip (from approximately level of $r-m$ crossvein) brown-stained. Legs brown-yellow except for tips of hind femora which are dark red-brown and tarsi which are dark brown; setae mostly long yellow but mixed with black on pro- and mesothoracic tarsi and almost entirely dark red-brown on hind tarsi; hind femur with *ca* 4 strongly developed bristles distally.



Figs 5-11. *Smeryngolaphria* species. 5-7. Anterior aspect of head. 5. *S. melanura* (Wiedemann). 6. *S. pallida* Bromley. 7. *S. bromleyi* sp. n. 8-11. Antennae. 8-9. *S. pallida* Bromley. 10-11. *S. bromleyi* sp. n. Scale lines = 1 mm.



Figs 12-14. *Smeryngolaphria melanura* (Wiedemann), holotype ♂ genitalia. 12. Lateral. 13. Dorsal. 14. Ventral. Note: Aspects do not take rotation into account. Scale = 1 mm.

Abdomen: Terga 1–4 brown; T5 dark red-brown dorsocentrally, brown-yellow laterally; T6–7 dark red-brown. 2–4 discal bristles on all terga; setae yellow on brown-yellow parts, black on dark red-brown areas. S1–5 yellow, S6–8 dark red-brown with longish setae. Genital bulb yellowish, rotated through 90°. Genitalia as illustrated in Figs 12–14; aedeagus with three short terminal filaments (a plesiomorphic condition found in all Laphriinae).

Female: Not studied.

Material examined: BRAZIL: 1 ♂ holotype, 'Brasilien', 'melanura Coll. Winthem', 'Type W.' (NMW). This inconspicuously labelled specimen has been provided with a modern type label.

DESCRIPTION OF AFROTROPICAL SPECIES

Key to Afrotropical species of *Smeryngolaphria*

- 1 First four obvious abdominal terga (T2–5) brownish with tiny black setae except for lateral margins which have yellow setae; last two obvious terga (T6–7) yellow, entirely covered with yellow setae. Face relatively wide (width of face to width of entire face in anterior view ratio *ca* 5). Aedeagus with long terminal filaments; ♀ with relatively pointed cerci ... ***pallida*** Bromley, 1935
- All six obvious terga (T2–7) of similar yellowish colour; all these terga with black setae dorsally and yellow setae laterally. Face relatively narrow (width of face to width of entire face in anterior view ratio *ca* 7). Aedeagus with relatively shorter terminal filaments; ♀ with relatively more rounded cerci ***bromleyi*** sp. n.

Smeryngolaphria pallida Bromley, 1935

Figs 1, 3, 6, 8–9, 15–21, 28

Smeryngolaphria pallida Bromley, 1935: 410; Hull, 1962: 333; Oldroyd, 1970: 235; Oldroyd, 1980: 355.

Redescription: Based on holotype ♂ (Fig. 1).

Head: Dark red-brown but colour largely masked by pruinescence. Antenna (Figs 8–9) dark brown: Setae of scape and pedicel yellow and dark red-brown mixed; scape with long yellow ventral bristle; flagellomere uniformly covered with microtrichia except for anterocentral depressed area containing more tightly packed microtrichia (this may be a sense organ); tip with narrow pit containing a single spine. Face width: maximum head width (measured anteriorly) ratio 4.9:1 (Fig. 6). Face silver pruinose and uniformly covered with silvery glistening dorsoventrally flattened scale-like setae (longer in ventral half); normal setae confined to a row of shiny white setae along lower facial margin and a pair of long shiny white setae at about midway between antennal bases and lower facial margin. Vertex and frons uniform silver pruinose with tiny dark red-brown setae laterally along eye margins. Ocellarium prominent with a pair of long black ocellar bristles. Occiput red-gold pruinose centrally, silver pruinose adjacent to hind margins of eyes; upper occipital bristles black, directed vertically; other occipital setae mostly of moderate length, shiny silver-white. Proboscis and 2-segmented palpi yellow-brown with fine silver-white setae.

Thorax: Brown-yellow, uniformly fine silver pruinose. Postpronotal lobes with gold-yellow setae. Mesonotum with tiny gold-yellow and black setae; acrostichal setae undifferentiated; dorsocentrals weakly defined postsuturally; 1 strongish notopleural bristle accompanied by 2–3 longish black setae; 3 gold-yellow supra-alars; 2 gold-yellow postalars accompanied by 1 long black seta. Scutellum with small black and gold-yellow setae on disc, 5 gold-yellow marginal bristles accompanied by shorter yellow and black setae. Anatergites with well-developed gold-yellow setae. Pleura fine silver pruinose; all setae and bristles gold-yellow. Hind margin of anepisternum with 3 well-developed gold-yellow bristles; katatergum with many long gold-yellow bristles. Postmetacoxal area membranous. Wing length 7.0 mm (from humeral crossvein to tip); venation as in Fig. 3; except for small narrow areas of cells br, bm, cup and a_1 wing covered with microtrichia; r_1 closed and with long stalk; r_5 open; m_3 closed and stalked; r-m crossvein at about one-third the distance along anterior margin of discal cell; membrane transparent. Legs brown-yellow; setae longish gold-yellow; hind femora without obvious distal bristles; pulvilli pale yellow, well developed.

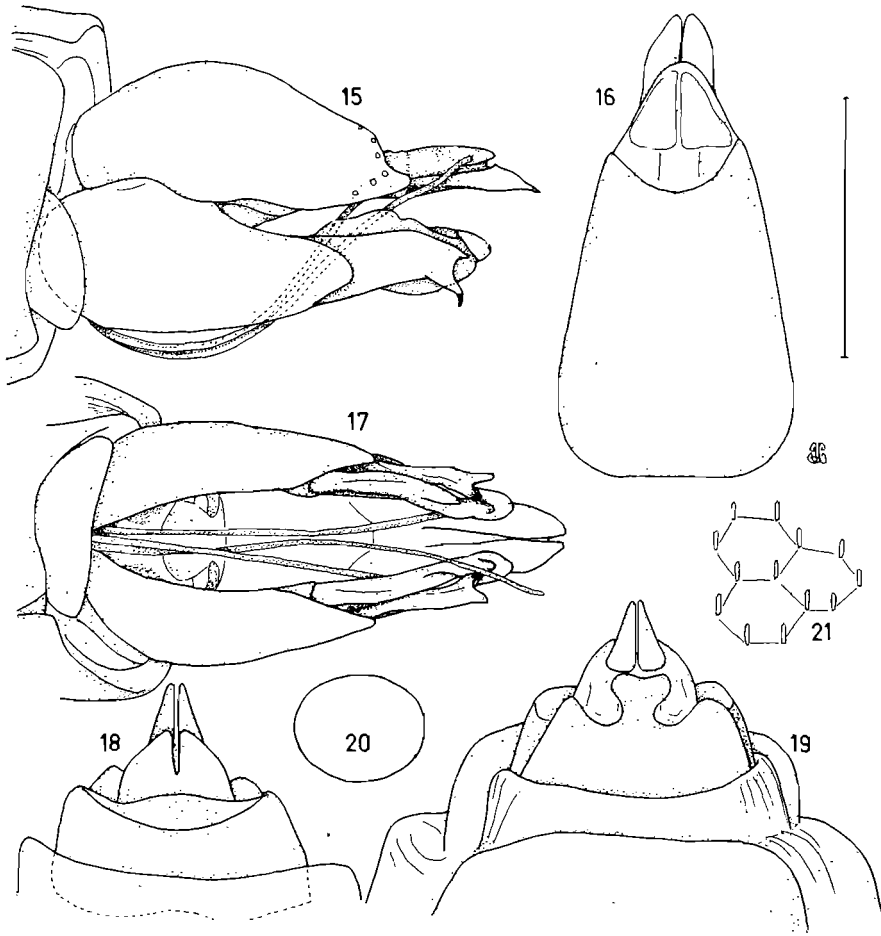
Abdomen: First four obvious terga (T2–5) brown with most setae short black, lateral ones gold-yellow; T6–7 yellow, all setae yellow. Gold-yellow discal bristles present on all terga; all terga fine gold pruinose. Sterna yellow with gold-yellow setae. Genital bulb yellowish, rotated through 90°. Genitalia (Nigerian ♂ illustrated) as in Figs 15–17; aedeagus with three long terminal filaments.

Female: Agrees well with ♂ except for following features: Antennae entirely missing. Shiny silver scale-like facial setae limited to 2 small laterally situated groups in lower third of face; most facial setae black, of moderate length; mystacal bristles present on lower facial margin as in ♂ but 4 major central ones broken off leaving sockets. Wing 7.0 mm long; cell r_5 of left wing closed at wing margin. Genitalia as in Figs 18–19; cercus with acute apex. Egg (dissected from body cavity) with shape as in Fig. 20; surface with fine pattern of hexagonal reticulation, tiny spine-like structures present at each intersection of reticulation (Fig. 21).

Variation: The Nigerian ♂ agrees in all important ways with the holotype. Minor differences are as follows: All but one scutellar bristle are black. Wing 5.5 mm long.

Material examined: ZAÏRE: 1 ♂ holotype, Congo, Walikale, 1°25'S: 28°E [1°25'S: 28°03'E], 7.i.1915, J. Bequaert (MCZ Type 20137). CENTRAL AFRICAN REPUBLIC: 1 ♀, La Maboque (Rep. Centrafr.) [Maboké—stream 3°54'N: 17°53'E], 6.vii.1964, J. Carayon rec. (MNP). NIGERIA: 1 ♂, W. Nigeria, Illaro Forest [Illaro Forest Reserve—6°47'N: 3°04'E], 24.iii.1974, M. A. Cornes, 4075 (NMWC). Distribution as in Fig. 28.

Other recorded material: Oldroyd (1970: 235) records: 1 ♀, 'W. Kivu, Lubongola, pr. Shabunda, 1939, Dr Hautman' housed in KMT. I have not seen this specimen, illustrated (head and tip of tarsus) by Oldroyd, but am confident that it was correctly identified. The locality 'Lubongola' cannot be found in available gazetteers and two places by the name of 'Shabunda' have been found [1°41'S: 28°48'E & 2°42'S: 27°20'E]; the first listed has been used to plot this record on Fig. 28.



Figs 15–21. *Smeryngolaphria pallida* Bromley. 15–17. ♂ (Nigeria, Illaro Forest). 15. Lateral. 16. Dorsal. 17. Ventral. 18–19. ♀ (Central African Republic, La Maboké). 18. Dorsal. 19. Ventral. 20–21. Egg. 20. Outline shape. 21. Reticulated surface (diagrammatic). *Note:* Aspects do not take rotation into account. Scale = 1 mm.

***Smeryngolaphria bromleyi* sp. n.**

Figs 4, 7, 10–11, 22–27, 28

Etymology: Named after Dr Stanley Bromley who was first to record the presence of this genus in Africa.

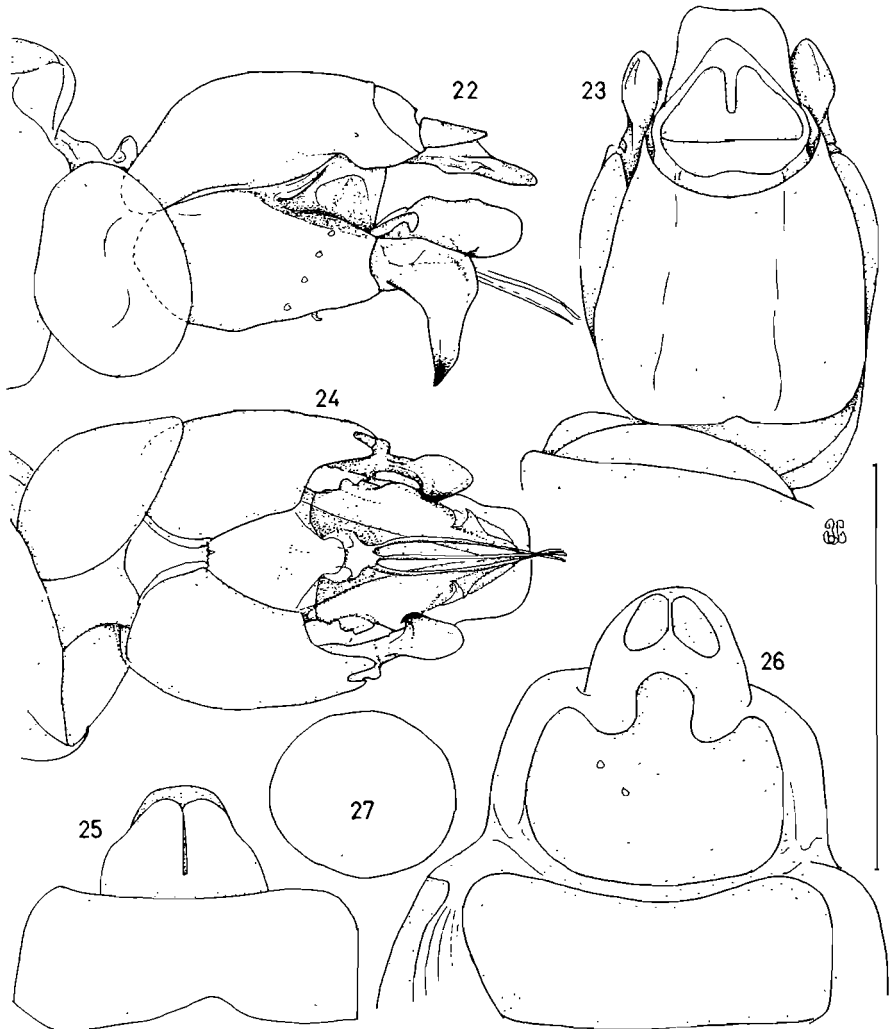
Description: Based on holotype ♂. Similar to *S. pallida* except for following details.

Head: Antenna (Figs 10–11) brown-yellow but distal part of flagellomere darker brown; scape and pedicel with yellow setae only; flagellomere with oval-shaped anterior depressed area. Face fairly narrow, face width: maximum head width ratio 7,2:1 (Fig. 7). Silvery scale-like mystacial setae narrower than in *pallida* but otherwise with similar appearance and distribution. Setae and bristles of vertex

shiny yellow. Ocellarium with 1 black and 1 yellow bristle. Upper occipital bristles shiny yellow. Proboscis and palpi brown-yellow.

Thorax: 1 strong yellow notopleural bristle accompanied by 2 black setae; 2 black supra-alars (1 yellow on left side); 1-2 black postalars; *ca* 8 black scutellar bristles; all scutellar setae black. Wing length 5,7 mm; venation as in ♀; distribution of microtrichia not as extensive as in *pallida*—cells *c*, r_1 , r_{2+3} , r_5 and discal also with small bare areas.

Abdomen: All terga similar in colour and with short black setae dorsocentrally. Genitalia as in Figs 22-24, quite different from *pallida*; aedeagus with moderately long terminal filaments.



Figs 22-27. *Smeryngolaphria bromleyi* sp. n. 22-24. Holotype ♂ genitalia. 22. Lateral. 23. Dorsal. 24. Ventral. 25-26. ♀ paratype. 25. Dorsal. 26. Ventral. 27. Egg, outline shape. *Note:* Aspects do not take rotation into account. Scale = 1 mm.

Female: 1 ♀ paratype pinned together with holotype ♂ (captured whilst copulating). Similar to ♂. Antennal flagellomere somewhat more attenuate. Distribution of scale-like mystacial setae as in ♀ *pallida* but normal setae all white. Ocellar bristles gold-yellow. All marginal bristles of mesonotum and scutellum yellow-brown except for 2 black ones on scutellar margin. Wing 6,8 mm long, venation as in Fig. 4. Genitalia as in Figs 25–26; cerci distally rounded. Egg (Fig. 27) (dissected from body cavity) similar to *pallida* but tiny spines somewhat smaller.

Material examined: NIGERIA: 1 ♂ holotype 1 ♀ paratype, Nigeria, Sapoba [6°06'N: 5°53'E], 17.iv.1946, M. A. Cornes, Forest, 6622 (NMWC). Distribution as in Fig. 28.

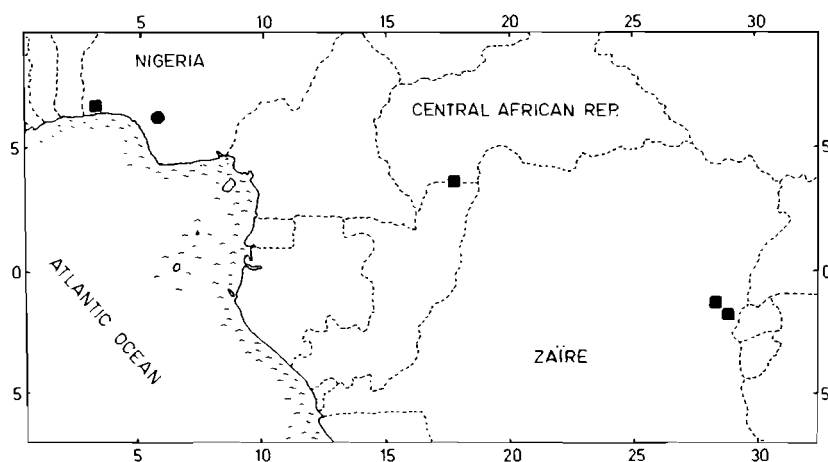


Fig. 28 Distribution of Afrotropical *Smeryngolaphria* species. ■ = *S. pallida* Bromley.
● = *S. bromleyi* sp. n.

DISCUSSION

An examination of available catalogues reveals that there are five described species of *Smeryngolaphria* in the world fauna. With the addition of the new species described above and additional data provided elsewhere in this paper, the list is extended to six as follows:

Neotropical

1. *S. maculipennis* (Macquart, 1846) with *pictipennis* Hermann, 1912 and *aurata* (Enderlein, 1914) as synonyms. From: Brazil, Bolivia, French Guiana and Surinam.
2. *S. melanura* (Wiedemann, 1828). From: Brazil.
3. *S. numitor* (Osten Sacken, 1887) with *xylota* (Curran, 1930) and *panamensis* (Curran, 1942) as synonyms. From: Guatemala, Nicaragua and Panama.
4. *S. seabrai* Carrera, 1960. From: Brazil.

Afrotropical

1. *S. pallida* Bromley, 1935. From: Central African Republic, Nigeria and Zaïre.
2. *S. bromleyi* sp. n. From: Nigeria.

There is no doubt that *bromleyi* and *pallida* are very closely related congeneric species; what is less certain is that they belong to the genus occupied by Neotropical species of *Smeryngolaphria*. A comparison with the type-species, *S. melanura*, suggests that while the two Afrotropical species are somewhat smaller and possess setose anatergites, they are in many respects remarkably similar. *S. melanura* possesses characteristically marked wings, but this feature is possessed by only two of the four Neotropical species (Carrera 1960); the others have clear wings like the Afrotropical species. *S. melanura* has a bicoloured face, and the mystax is largely confined to the lower half of the face; these features are also apparently variable within the Neotropical species (Hull 1962, Carrera 1960). While the aetose anatergites of Neotropical species could be seen as an apomorphy sufficiently important to support the separation of the Afrotropical species to a genus of their own, I prefer, at least until further information is available to me, to follow Bromley (1935) and retain the Afrotropical species in *Smeryngolaphria*.

There are, according to the available catalogues, a number of other genera, besides *Smeryngolaphria*, which have been reported from both Neotropical and Afrotropical regions; among which are four other genera of Laphriinae (*Laphria*, *Nusa*, *Andrenosoma* and *Perasis*). Although I believe that there are unlikely to be any true *Laphria* in Africa (they are probably all *Choerades*) the occurrence of the other genera in both regions suggests that the distribution of *Smeryngolaphria* is acceptable.

In a recently published key to the Afrotropical genera of Laphriinae (Londt 1988), I stated erroneously (couplet 28) that Afrotropical *Smeryngolaphria* were large (> 20 mm), in the belief that they were like their Neotropical counterparts. I had not seen representatives of the genus when the key was constructed, nor had I taken note of Bromley's (1935) measurements of *S. pallida*. Now that I have seen material, I am able to state that the genus keys out correctly using the other features mentioned in the key. The two Afrotropical genera with which *Smeryngolaphria* is most likely to be confused are *Notiolaphria* Londt and *Nannolaphria* Londt (separated from *Smeryngolaphria* in couplet 28 of the above-mentioned key). Species belonging to the latter two genera are also fairly small, but are entirely shiny black in colour and have relatively short antennal flagellomeres.

INSTITUTIONAL ABBREVIATIONS

- NMW = Naturhistorisches Museum Wien, Wien, Austria.
MCZ = Museum of Comparative Zoology, Cambridge, U.S.A.
MNP = Muséum National D'Histoire Naturelle, Paris, France.
NMWC = National Museum of Wales, Cardiff, Wales, U.K.

ACKNOWLEDGEMENTS

I thank the curators of the collections mentioned above for their co-operation, and Dr Brian Stuckenberg for reading and commenting on the manuscript. I am indebted to the Council for Scientific and Industrial Research (Foundation for Research Development) for a Comprehensive Grant in support of my work on Afrotropical Asilidae.

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Received: 7 March 1989